

Acute pneumonia in a cat

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History:

A 4.5 year old neutered male domestic short-haired cat was presented to the referring practice for acute dyspnea, coughing, retching and anorexia. The coughing was productive of thick mucus. Initial treatment with broad spectrum antibiotics, carprofen and frusemide did not result in improvement. On radiography, there was a diffuse density in the lung field around the heart and a small amount of exudate with a predominance of neutrophils was present on thoracocentesis.

Clinical examination and imaging:

On referral to the University of Edinburgh one week later, the cat markedly dyspneic and was mouth-breathing. His body condition was good and no external lesions were seen. The heart rate was 140b/min and respiratory rate 24/min with increased inspiratory and expiratory effort. Increased lung sounds were audible bilaterally, mainly referred from the upper respiratory tract. There was increased soft tissue density throughout the left lung on radiography and evidence of consolidation of this lung and mild pleural effusion on the left on ultrasonography. A presumptive diagnosis of unilateral pneumonia, most likely of bacterial origin, was made.

Initial progress and treatment:

The cat was placed in an oxygen chamber and administered marbofloxacin, amoxicillin/clavulanate, clindamycin, dexamethasone and the bronchodilator, terbutaline. When the left thoracic wall was clipped, five, slightly raised, erythematous skin lesions were detected, each 3-4mm in diameter. Thoracocentesis and lung FNA were undertaken and a skin biopsy of a skin lesion performed. Direct smear preparations of pleural fluid were stained with May-Grünwald-Giemsa (MGG, Fig 1). MGG-stained lung FNA direct smears are shown in Figs. 2 and 3. The cat was too dyspneic for venepuncture or bronchoalveolar lavage.

What cytologic features are present?

What is your differential diagnosis and how would you investigate this case further?

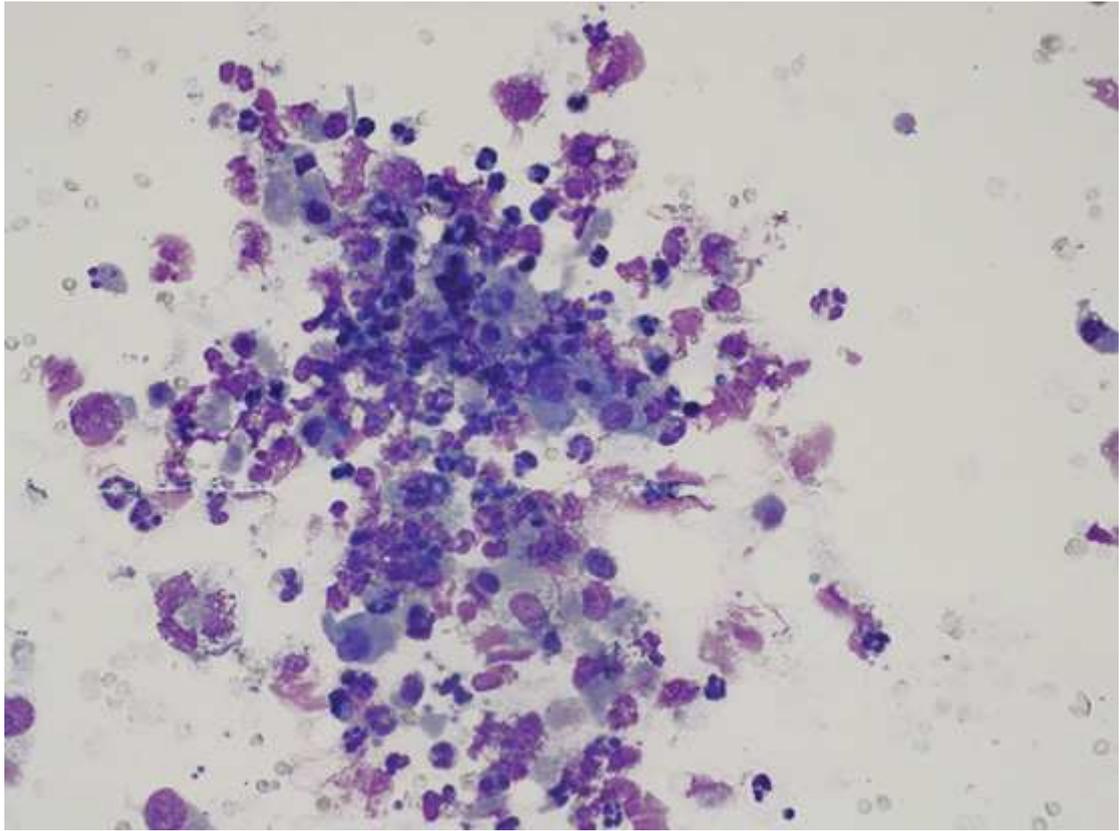


Fig. 1. Pleural fluid, direct smear. MGG x200.

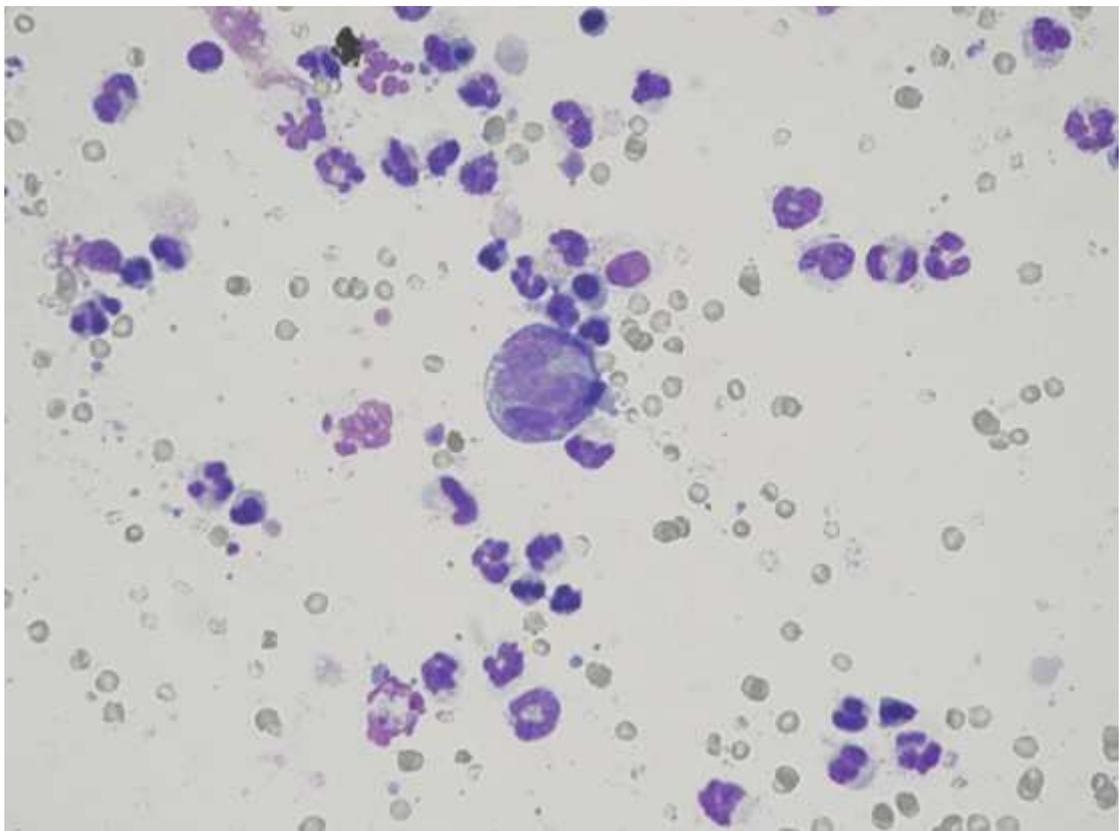


Fig. 2. Lung FNA, direct smear. MGG x400.

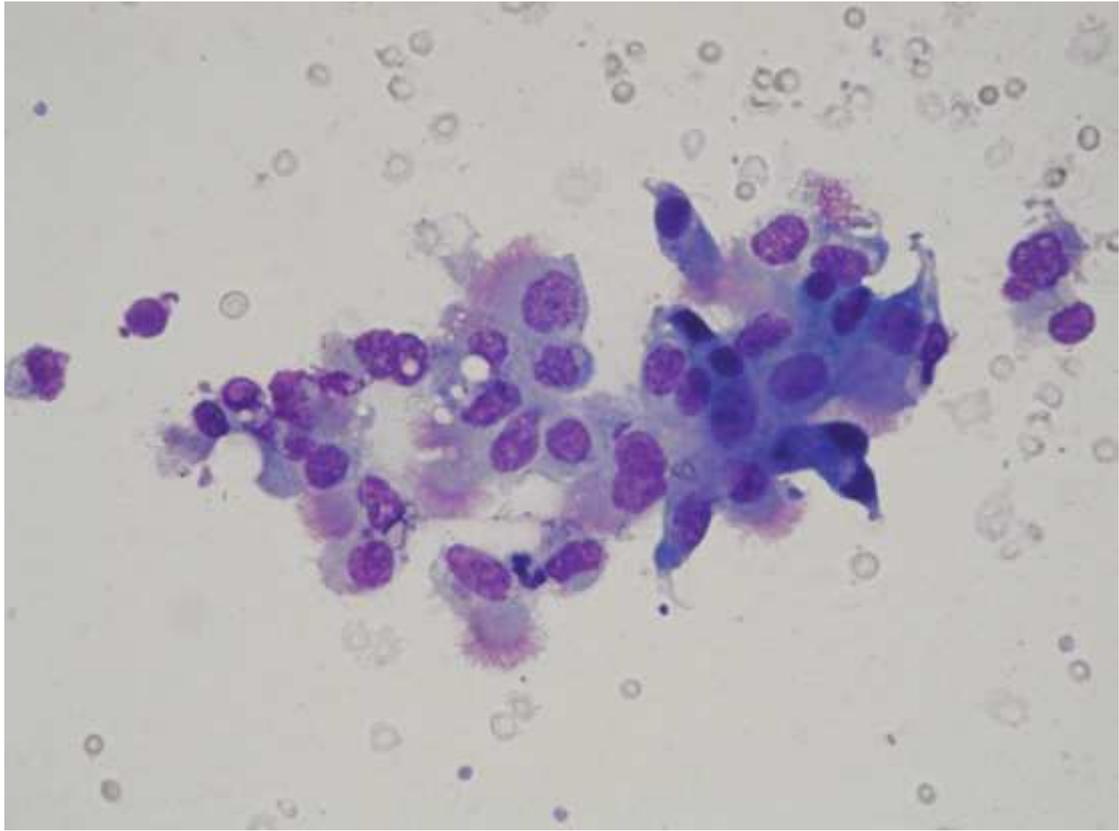


Fig. 3. Lung FNA, direct smear. MGG x400.